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8 November 1955

RUCB
SAPC 2554
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CMCC. Doc. No. 151.730

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Dear Dick:

We are forwarding herewith five copies of Informal Monthly Progress Report No. 3, covering the work performed on System No. 2 during the period extending from 14 August 1955 to 21 October 1955. This report is further identified by CMCC Doc. No. 163.2015.

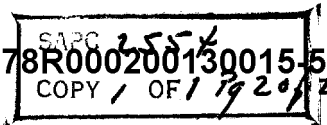
You will note that the scope of this report is more nearly equivalent to that normally covered by a quarterly progress report than an informal monthly report. In view of the importance of System No. 2, however, and the fact that certain basic changes were effected in the approach to solution of the System No. 2 problem, it is believed that the elaboration of detail presented in this report is justified. Diagrams defining all essential system components are presented to aid in a description of the theory underlying operation of both the communication and navigation functions.

As I mentioned to you during our recent meeting on the coast, we are planning to transistorize equipment components to the greatest degree consistent with performance and reliability requirements. It is hoped by this means to minimize the problems of heat dissipation that would result if vacuum tubes were employed throughout, and to reduce both size and weight of the equipment to the greatest extent possible.

Work on the development of this system has been given priority over every other activity in our Communications Division. As you realize, the task of completing the design and fabrication of prototype equipment within the short time that we have allotted for this work is a most difficult one, but appears to be proceeding at a rate that suggests a very high probability of our completing the equipment necessary for flight tests on the date which was set many months ago. We assume that you are in agreement with our intent to employ the C-47 airplane for flight-test operations.

I am addressing a letter to George in which we have indicated our best estimate of the costs of erecting on land recently acquired by our company the various ground facilities required for conduct of the initial operational tests on the system. I hope you will understand that we have no particular desire to erect these facilities on our property; we are suggesting this approach partly because the site under consideration is conveniently located to our main plant and partly because we are not aware of an equally suitable plot of land, Government owned or controlled, which could be employed for this purpose. If Government-controlled property exhibiting suitably flat terrain were available, we would prefer greatly to erect the facilities necessary at such a location since there would then be no question as to the duration over which these facilities could be permitted to exist. If they are erected on our property, it is more than likely that they will need to be

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removed by or shortly after mid-1956 to permit construction of certain buildings which are contemplated for that site.

Should you have any comments concerning the desirability of considering other locations for the ground facilities required by System No. 2, we would appreciate receiving these at your earliest convenience.

Sincerely,

Burt

Enclosures:

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